PRIORITY PROPAGATION IN A MULTI-LEVEL SCHEDULING HIERARCHY

Abstract of the Disclosure

5   Priority propagation is achieved in the context of a rate-based scheduling hierarchy. Priority traffic is not delayed by non-priority traffic by more than the duration required for transmission of the maximum packet length at the physical interface speed. Multiple sibling priority levels are supported. To achieve these objectives, the scheduling hierarchy tree is divided into sub-trees corresponding to non-priority traffic and the

10   different levels of priority. At each scheduling decision, a packet is selected from the highest priority non-empty sub-tree. Scheduling decisions within each sub-tree exploit the usual rate-based scheduling method but without priority propagation. When a packet from a priority sub-tree is chosen, scheduling state in the non-priority sub-tree is updated.